

CLASSIFIED MESSAGE

**TOP SECRET**

ORIG :   
 UNIT : NPIC/PSG/R&RD/DAS  
 EXT :   
 DATE : 2 June 1970

TO : SAC ACIC, FTO, USAFE, PACAF, ARMY, DIA, NAVY, TOPOCOM  
 AHS, 544ARTW OFFUTT, FICEUR, OPCEN

FROM: NPIC

CONF:

INFO:

## ROUTING

1	4
2	5
3	6

3 JUN 70 17 05

DEFERRED	X	PRIORITY	INITIALS
ROUTINE	X	OPERATIONAL IMMEDIATE	INITIALS

OUT69987

TO

TOP SECRET.

CITE NPIC

CITE

SUBJECT: CAMERA INFORMATION FOR MISSION 1110-1

1. THE MISSION UTILIZED TWO PAN CAMERAS, FOUR HORIZON CAMERAS, DUAL STELLAR CAMERAS AND AN INDEX CAMERA.
2. CAMERA DATA

## A. MAIN UNITS

FOCAL LENGTHS(MM)	PAN CAMERAS	PORT HORIZONS	STBD HORIZONS
FWD 609.6508		NA	NA
AFT 609.6610		NA	NA

## FILTERS

PAN FWD	PRIMARY	W -23A
PAN FWD	ALTERNATE	W -25
PAN AFT	PRIMARY	W -21
PAN AFT	ALTERNATE	W -23
FWD STBD	HORIZON	W -25
FWD PORT	HORIZON	W -25
AFT STBD	HORIZON	W -25

COORDINATING OFFICERS

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RELEASING OFFICER

AUTHENTICATING OFFICER

GROUP 1  
 Excluded from automatic  
 downgrading and  
 declassification

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25X1

25X1

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25X1

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ROUTING			
1		4	
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RECEIVED	DEFERRED	PRIORITY	INITIALS
	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS

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TO INFO CITE

AFT PORT HORIZON W-25

APERTURE

STBD HORIZON F 8.0

PORT HORIZON F 6.3

FILM

FWD 3404/SO-349/3404

AFT 3404/SO-349/3404

DYNAMIC RESOLUTION (LINES/MM)

FWD HIGH CONTRAST 268

FWD LOW CONTRAST 159

AFT HIGH CONTRAST 243

AFT LOW CONTRAST 160

UNIT NUMBER FWD 323

40  
AFT 322

B. DISIC UNIT NO. 10

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P R O C E D U R E	DEFERRED	PRIORITY	INITIALS
	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS

-3-

TO	INFO	CITE
	PORT STELLAR	STBD STELLAR INDEX
10	76.165	76.171 76.358
	FILTER (WRATTEN)	NONE NONE W-12
	EXPOSURE (SEC)	1.5 1.5 1/500
	FILM	3401 3401 3400

## 3. LENS DISTORTION (PIN CUSHION) (MM)

## A. MAIN UNITS

	31	46	46	56	55	60	65
10 ANGLE OFF AXIS (DEG)	3	2	1	0	359	358	357
FWD	.004	.002	0	0	0	.001	.003
AFT	.001	0	0	0	0	.001	.002

## B. HORIZON CAMERA DISTORTION

	FWD PORT	FWD STBD	AFT PORT	AFT STBD
RADIAL 10 DEG	.01	.01	.02	.01
20 DEG	.05	.03	.04	.05
TANGENTIAL	.016	.028	.025	.006

## 4. CAMERA ANGLES

## A. ANGLE BETWEEN PAN CAMERAS NA

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ROUTING			
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3		6	
RESPONSE	DEFERRED	PRIORITY	INITIALS
	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS

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TO

INFO

CITE

B. DEPRESSION ANGLES BETWEEN HORIZONS AND PAN CAMERAS NA

C. ANGLES BETWEEN STELLAR AND INDEX CAMERA

STBD STELLAR AND INDEX 160 DEG 00 MIN 43.0 SEC

PORT STELLAR AND INDEX 99 DEG 59 MIN 16.0 SEC

## 5. TIMING MARKS

FREQUENCY MARKS WILL APPEAR ON THE FILM AT A RATE OF 200 CYCLES  
PER SECOND.

## 6. IMAGE MOTION COMPENSATION DATA

5 PASSES	36 REF LEVEL	50 AMP LEVEL
1D, 4D	2	13
6D THRU 25D	1	13
37D THRU 40D	3	13
42D, 128D THRU 134	2	5
48D THRU 56D	2	6
57D THRU 59D	3	6
70D THRU 76D	3	7
85D THRU 90D	2	8

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P		DEFERRED	PRIORITY	INITIALS
R		ROUTINE	OPERATIONAL	INITIALS
R			IMMEDIATE	

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TO	INFO	CITE
97D THRU 103D	2	9
106D	3	9
118D	3	10
121D THRU 123D	3	11
137D, 138D	3	5
145D	4	5
152D THRU 155D	4	6
167D	2	7

FOR ALL PASSES PRIMARY PERIOD 3998 SECONDS, SECONDARY PERIOD 2623 SECONDARY  
RAMP FACTOR 0.057700

7. PROGRAM TIME DATA  
CAMERA ON TIME  
(ZULU TIME)

PROGRAM ON TIME  
UP RAMP

PROGRAM  
DURATION

PASS	DAY	HR	MIN	SEC	SEC	SEC
1D	20	23	01	18	1580	36
4D	21	03	25	45	1496	78
6D	21	06	30	20	2030	122
7D	21	08	00	41	2133	103

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PRECEDENCE	DEFERRED	PRIORITY	INITIALS
	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS

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TO	PASS	DAY	HR	INFO MIN	SEC	CITE	SEC
	9AE	21	10	30	50	456	25
	10D1	21	12	29	48	2276	86
	10D2	21	12	40	54	2943	62
	16D	21	21	16	58	2004	40
	19D	22	01	35	38	1589	102
	20D	22	03	04	14	1591	83
	21D1	22	04	36	58	1841	63
	21D2	22	04	38	46	1950	99
	22D1	22	06	03	15	1705	293
	22D2	22	06	09	57	2107	104
	23D	22	07	36	08	1966	91
	24D	22	09	04	22	1949	47
	25D1	22	10	30	16	1792	80
	25D2	22	10	36	11	2146	34
	37D	23	04	14	21	1925	173
	39D	23	07	12	18	1987	134

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PRIORITY	DEFERRED	PRIORITY	INITIALS
	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS

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TO	INFO					CITE	
	PASS	DAY	HR	MIN	SEC	SEC	SEC
	40D	23	08	42	48	2113	42
	42D	23	11	41	58	2039	72
	48D	23	20	34	24	2060	30
	53D	24	03	53	19	1806	134
	54D	24	05	21	26	1776	45
	55D	24	06	54	11	2025	41
	56D	24	08	21	11	1930	97
	57D1	24	09	44	01	1584	110
	57D2	24	09	48	42	1865	139
	58D	24	11	21	03	2089	39
	59D1	24	12	48	34	2024	73
	59D2	24	12	50	14	2123	85
	70D	25	05	03	07	2048	110
	72D	25	07	55	47	1783	164
	73D1	25	09	29	00	2066	35
	73D2	25	09	30	18	2144	89

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P R O C E D U R E	DEFERRED	PRIORITY	INITIALS
	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS

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TO	PASS	DAY	HR	MIN	SEC	SEC	CITE	SEC
74D1	25	10	53	19	1812	92		
74D2	25	11	00	06	2219	86		
74D3	25	11	02	42	2375	36		
76D	25	13	57	23	2237	84		
85D	26	03	07	55	1913	82		
87D	26	06	04	11	1854	79		
88D	26	07	33	26	1893	163		
89D1	26	09	04	05	2016	35		
89D2	26	09	06	05	2136	47		
89D3	26	09	08	09	2261	47		
90D	26	10	31	41	1955	65		
97D	26	20	54	42	2133	52		
102D1	27	04	15	06	1990	49		
102D2	27	04	17	23	2128	67		
103D	27	05	42	13	1905	39		
106D	27	10	13	46	2233	104		

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COORDINATING OFFICERS	DEFERRED	PRIORITY	INITIALS
	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS

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TO	PASS	DAY	HR	MIN	SEC	SEC	CITE	SEC
	118D	28	03	53	34	2116		79
	121D	28	08	20	34	2218		96
	122D1	28	09	43	20	1878		163
	122D2	28	09	53	48	2506		72
	123D	28	11	20	14	2388		57
	128D	28	18	42	02	2081		62
	129D	28	20	08	12	1932		67
	134D	29	03	30	01	1863		98
	137D	29	07	57	33	1973		92
	138D	29	09	20	42	1647		58
	145D	29	19	48	09	2106		39
	152D	30	06	02	39	1801		148
	153D1	30	07	28	12	1625		85
	153D2	30	07	34	18	1991		175
	154D1	30	08	56	13	1597		79
	154D2	30	09	02	13	1958		33

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P R E C E D E N C E	DEFERRED	PRIORITY	INITIALS
	ROUTINE	OPERATIONAL IMMEDIATE	INITIALS

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TO	INFO					CITE	
	PASS	DAY	HR	MIN	SEC	SEC	SEC
	154D3	30	09	03	42	2047	37
	155D1	30	10	28	47	1843	211
	155D2	30	10	34	17	2173	36
77	167D	31	04	13	44	1904	187

## 8. TIME CORRELATION (MILLISECONDS)

PASS	CLOCK TIME	SYSTEM TIME	DIFFERENCE
9	116269.448	37669.8891	-
16	155150.431	76550.8651	.007
25	201366.964	36367.3895	.009
32	240208.069	75208.4870	.007
41	286361.823	34962.2316	.009
48	325285.420	73885.8205	.008
57	371503.369	33703.7594	.010
64	410445.614	72645.9956	.009
73	456625.508	32425.8788	.011

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P R O C E D U R E		DEFERRED		PRIORITY	INITIALS
		ROUTINE		OPERATIONAL IMMEDIATE	INITIALS

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TO	INFO	CITE		
	PASS	CLOCK TIME	SYSTEM TIME	DIFFERENCE
	81	500737.923	76538.2831	.011
	89	4854.361	31125.6229	.009
	97	49273.365	75544.6154	.011
	106	95201.900	35073.1382	.012
	113	134008.847	73880.0746	.011
	122	180171.689	33642.9035	.013
	129	218957.505	72428.7083	.011
	138	265183.183	32254.3725	.014
	145	304094.256	71165.4337	.012
	154	350250.803	30921.9662	.014
	161	389160.382	69831.5327	.012

NOTE: ALL "DIFFERENCE" VALUES ARE PLUS.

NOTE: HORIZON CAMERAS FOCAL LENGTHS, ANGLE BETWEEN PAN CAMERAS,  
DEPRESSION ANGLES ARE NOT AVAILABLE AT THIS TIME.

END OF MESSAGE

COORDINATING OFFICERS

Ch/PSG

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Ch/R&amp;GD/PSG

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